

Amendments to the Specification:

Please replace paragraph [0014] with the following amended paragraph:

[0014] Figure 1 shows a simplified schematic representation of a communication system 100 for determining the contextual surroundings of one or more subscriber units 101 and 103 (and therefore, the contextual surroundings of a person using the subscriber units 101 and 103) using short-range wireless signals as well as for determining the contextual surroundings of various appliances, equipment and other devices, all of the presences of which are context determinative. For purposes of this disclosure “context” is considered to be one or more interrelated conditions in which a thing, such as the subscriber units 101 and 103 or the devices 102, 104, 106 and 108 exist or in which an event occurs. Thus, the “context” of a subscriber unit 101 and 103, which can be embodied in part by a personal digital assistant (PDA), cellular telephone, pager or the like, is considered to be an environment in which the subscriber unit 101, 103 is located. Inasmuch as “context” is an environment in which a subscriber unit 101, 103 or device 102, 104, 106 and 108 is located, “context” can also include, or be affected by, context-determined services that are provided to the subscriber unit 101, 103 by an external service provider as well as non-context-determined services that are available or unavailable to the subscriber unit 101, 103 within a geographic area. By operatively coupling a subscriber unit 101, 103 or other context-determining device, ([e.g.]e.g., device 106) to a short-range wireless signal transceiver using a standard communications protocol, such as Bluetooth, the subscriber unit 101, 103 or other device can effectively determine [[it's]]its context (in the geographic coverage area of the short-range wireless signals) from signals broadcast from other context determinative devices such as other subscriber units 103 or transceiver devices 102, 104, and 108 that also use the same communication protocol.

Please replace paragraph [0016] with the following amended paragraph:

[0016] Context can be derived or inferred from the presence of certain other devices in a given area, whether those devices are the aforementioned subscriber units or “devices.” Context can also be derived or inferred from measurable characteristics of equipment and fixtures in an area proximate to (or surrounding) a person or device and which effectively define an environment merely by their presence or operation. By way of example, the presence and operation of metal cutting, bending and stamping equipment define the environment, (i.e., the context) of many heavy industries and manufacturing. Such equipment can be considered to correspond to the devices identified by reference numerals 102, 104, 106, and 108 in Figure 1. Detection of such equipment can be used to infer that a subscriber unit receiving one or more of the signals from such equipment is, or might be, in a factory of some sort. Imaging equipment such as x-ray machines, CT-scanners and ultrasound imaging equipment define environments ([[i.e.]], the “context”) commonly found in most hospitals and medical facilities. Such imaging equipment can also be considered to be represented by the devices identified by reference numerals 102, 104, 106 and 108. Detection of the presence or operation of devices like such imaging equipment could be used to infer that the subscriber unit 101 shown in Figure 1 (and a person carrying it) is in or near a hospital. By detecting that a person is proximate to such imaging equipment, or that a person has been proximate to such equipment over time, it can also be reasonably be inferred that the person has reason to be near such devices. It would also be reasonable to infer that the person might need or want to operate or use such equipment. Accordingly, for purposes of this disclosure, determining “context” should be construed to also include determining what a person wants or needs to do in a particular location or area, by the

presence and/or operation of certain kinds of devices. With respect to the aforementioned example of detecting the presence and operation of imaging equipment, by tracking usage of the detected imaging equipment over time, a person's cumulative exposure to harmful radiation can be derived and in so doing, provide a mechanism by which excess exposure might be avoided. Even the contents of vending machines (vended laundry detergents vs. vended soft drinks or foods) can also be indicative of an environment or "context."

Please replace paragraph [0017] with the following amended paragraph:

[0017] By knowing the presence, status, operation and usage of certain kinds of devices, equipment, appliances and machinery in a given area, the nature or kind of environment, ([i.e.], i.e., the context) in which such devices are located can be fairly accurately determined. Once a subscriber unit's context is determined, information that is particularly pertinent to a subscriber unit user in the current context can then be calculated locally within the subscriber unit or calculated remotely and thereafter provided to a person through the subscriber unit. By way of example, when short range wireless signals from a soft drink vending machine are detected by a subscriber unit, information can be obtained from the soda vending machine that could include the machine's presence, [[it's]]its contents or product offerings, [[it's]]its location relative to the subscriber unit or other soda vending machines and from such information, a person could decide whether to purchase a product and if so, how to locate the machine. An appropriately capable subscriber unit 101 that "hears" signals from the vending machine and that can communicate with the vending machine can query the vending machine for pertinent status information, such as whether it is operational, the products it offers and product prices.

Please replace paragraph [0020] with the following amended paragraph:

[0020] Attached to each device 102, 104, 106 and 108, is an associated, short-range wireless signal transceiver ~~[[110,112,]]~~110, 112, 114, 116 that is compatible with at least one communications standard by which the transceivers can readily communicate with each other so that the various transceivers can at least establish the presence of each other within the coverage area of the short range signals.

Please replace paragraph [0021] with the following amended paragraph:

[0021] In addition to being able to simply establish the presence of other devices, in a preferred embodiment, each of the devices 102, 104, 106 and 108 includes, or is coupled to, a processor or other device by which information about the device 102, 104, 106 and 108 (~~[[e.g.]]~~e.g., functionality, ~~operation~~operation, etc.) is collected, formatted and sent to the associated radio transceiver ~~[[110,112,]]~~110, 112, 114, 116 for broadcast using the short range wireless signals. In the preferred embodiment, the devices 102, 104, 106 and 108 and their associated radio transceivers 110, 112, 114 and 116 not only broadcast their own presence and status but also receive information announcing the presence and status of each other as well as receiving information announcing the presence and status of subscriber units 101 and 103. In so doing, the devices 102, 104, 106 and 108 can determine their own context (with respect to other devices and subscriber units) but also act as context determinative devices with respect to those other devices and subscriber units.

Please replace paragraph [0025] with the following amended paragraph:

[0025] The functional device component 202 is operatively coupled to a processing unit[[[,] 204, typically embodied as one or more microprocessors or microcontrollers that execute program instructions stored in memory (not shown) but known to those of ordinary skill in the art to include devices such as semiconductor read only memory (ROM), random access memory (RAM), magnetic disk and equivalents thereof. Those skilled in the art will also recognize that determining the status or operation of a device such as a vending machine or other device by way of a processor will require appropriate coupling of the processor 204 to the device component 202, typically using one or more analog-to-digital (A/D) converters (to measure analog signal quantities), digital-to-analog converters (D/A) (to control a device) and other interfacing equipment, well-known to those of ordinary skill in the computer art.

Please replace paragraph [0027] with the following amended paragraph:

[0027] In the preferred embodiment, context determination unit (CDU) software obtains context determinative information from the functional device 202 for transmission via the short-range wireless transceiver 210 (including, but not limited to: a detector; demodulator/discriminator and a modulator and power amplifier). Examples of context determinative information obtained from the functional device would include, but not be limited to; the presence of a particular device 202; its operability (operable or failed); recent or historical device 202 usage over different time periods (operating cycles over time); potentially problematic conditions ([[e.g.]]e.g., an overheating motor). When the context determination unit is software that operates or runs on the processor 204, it (and therefore the processor) are responsible for performing the function of determining the functionality of the device 202, as

well as its status (operative or inoperative) and historical activity, such as operating cycles per unit time.

Please replace paragraph [0030] with the following amended paragraph:

[0030] In Figure 2, the transceiver 210 for use with a device 102, 104, 106 and 108 receives (or collects) data from the processor 204, including the unique identifier data 300. In addition to simply sending a unique identifier, in an alternate embodiment, the processor can also acquire device 202 data (also referred to as ~~“information”~~“information”) from the device 202 and formats that data for transmission by the transceiver 210.

Please replace paragraph [0031] with the following amended paragraph:

[0031] By using short range wireless signals, information about one device 102, 104, 106 or 108 or subscriber unit 101 can be collected from it by another, communications-compatible device or from subscriber unit 103 when the devices and subscriber units are in relatively close proximity to each other. For purposes of this disclosure, “close proximity” and “short range” is ordinarily considered to be substantially less than the distance over which a cellular, PCS (personal communication system) or paging signal will propagate and typically on the order or less than 50 meters. Inasmuch as an objective of the present invention is to detect context in the immediate vicinity of a user, acquiring data of distant devices would adversely affect the ability of the subscriber units and devices to discern the presence and status of local devices and subscriber units of interest. In some embodiments of the present invention, “short range” would include distances greater than 50 meters because the distance over which the context of a subscriber unit is determined will be affected by the function and purpose of the

subscriber unit. As an example, when an airplane is parked at a gate, on a tarmac, its context will be affected by other aircraft, ground vehicles and personnel that might be only a few meters distant. In contrast, the context of an airplane in flight and on final approach to an airport will be affected by aircraft that might be several hundred meters distant. Accordingly, for purposes of claim construction, the term “short-range” should not be limited to less than 50 meters but more generally also to distances that are relevant to the particular subscriber unit and its function. In most instances however, “short range” is considered to be on the order of 50 meters or less. At present, there is at least one short-range wireless communications standard known as the “Bluetooth” standard. Details of the Bluetooth standard are available from the official Bluetooth web site: ~~www.bluetooth.com~~. The invention described and claimed herein should not be construed as limited to compliance with Bluetooth but should instead be understood to be useable with any short-range wireless communications protocol.

Please replace paragraph [0036] with the following amended paragraph:

[0036] In instances where context information needs to be displayed, information about the subscriber unit 400 surroundings can be displayed on a liquid crystal display screen 408 or other equivalent display devices such as a cathode ray tube (CRT) or via an audio output such as an “ear bud” all of which are considered for claim construction purposes to be equivalent user interfaces. In other instances, input queries or other input strings to a subscriber unit can be made via a keyboard, keypad, mouse, bar code reader or touch screen 410 enable a user to send text and data into the processor ~~[[304]]~~404 as well for transmission via a modulator 412 and amplifier 414.

Please replace paragraph [0050] with the following amended paragraph:

[0050] By tracking context of a subscriber unit 101 over time, a service provider can determine context ([[i.e.]]i.e., environments) in which the subscriber unit 101 has been present. Stated alternatively, by way of the information emitted from the various devices 102, 104, 106 and 108 with which a subscriber unit has been in communication with, it is possible to determine the contexts or ~~environs~~environments into which the subscriber unit has been transported. From the information obtained from the various context-determining devices 102, 104, 106 and 108, helpful information can be sent to the subscriber unit from either the devices or the service provider 118.

Please replace paragraph [0059] with the following amended paragraph:

[0059] As the subscriber unit 701 hears the Bluetooth compliant signals from the display kiosk 704 and printer kiosk 706, it can ascertain what the kiosks are as well as their capabilities, [[i.e.]]i.e., display and print. Inasmuch as the subscriber unit is capable of long-range communications via cellular, PCS or SMR radio or the like, a calling or called party can send data to the subscriber unit for either printing or display by forwarding such data to the subscriber unit 701. Upon receipt by the subscriber unit 701, resources in the kiosks 704 and 706 can be used to display or print files residing in the subscriber unit 701 by wirelessly transferring them to the kiosk-resident display device or printer device. Alternatively, a higher bandwidth connection could be made directly to one of the kiosks 704 or 706 for increased service fidelity. By knowing the context of the subscriber unit 701, [[i.e.]]i.e., the surroundings including resources such as the display and printer kiosks, a remote service provider 708 can extend services to the subscriber unit 701 that it alone cannot provide.